

New England Biolabs Certificate of Analysis

Product Name: *Bst DNA Polymerase, Full Length*
Catalog Number: M0328S
Concentration: 5,000 U/ml
Unit Definition: One unit is defined as the amount of enzyme that will incorporate 10 nmol of dNTP into acid insoluble material in 30 minutes at 65°C.
Packaging Lot Number: 10117614
Expiration Date: 07/2023
Storage Temperature: -20°C
Storage Conditions: 10 mM Tris-HCl, 50 mM KCl, 1 mM DTT, 0.1 mM EDTA, 0.1 % Triton®X-100, 50 % Glycerol, (pH 7.1 @ 25°C)
Specification Version: PS-M0328S/L v2.0

| Bst DNA Polymerase, Full Length Component List | | | |
|--|---------------------------------|------------|----------------------|
| NEB Part Number | Component Description | Lot Number | Individual QC Result |
| M0328SVIAL | Bst DNA Polymerase, Full Length | 10114999 | Pass |
| B9004SVIAL | ThermoPol® Reaction Buffer Pack | 10113098 | Pass |

| Assay Name/Specification | Lot # 10117614 |
|---|----------------|
| Protein Purity Assay (SDS-PAGE) Bst DNA Polymerase, Full Length is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection. | Pass |
| RNase Activity (Extended Digestion) A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 1 µl of Bst DNA Polymerase, Full Length is incubated at 37°C. After incubation for 16 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection. | Pass |
| qPCR DNA Contamination (E. coli Genomic) A minimum of 5 units of Bst DNA Polymerase, Full Length is screened for the presence of E. coli genomic DNA using SYBR® Green qPCR with primers specific for the E. coli 16S rRNA locus. Results are quantified using a standard curve generated from purified E. coli genomic DNA. The measured level of E. coli genomic DNA contamination is ≤ 1 E. coli genome. | Pass |
| Endonuclease Activity (Nicking) A 50 µl reaction in ThermoPol® Reaction Buffer containing 1 µg of supercoiled | Pass |

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|--|----------------|
| <p>PhiX174 DNA and a minimum of 50 units of Bst DNA Polymerase, Full Length incubated for 4 hours at 37°C and 65°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.</p> | |
| <p>Phosphatase Activity (pNPP) A 200 µl reaction in 1M Diethanolamine, pH 9.8, 0.5 mM MgCl₂ containing 2.5 mM p-Nitrophenyl Phosphate (pNPP) and a minimum of 100 units Bst DNA Polymerase, Full Length incubated for 4 hours at 37°C yields <0.0001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.</p> | Pass |
| <p>Non-Specific DNase Activity (16 Hour) A 50 µl reaction in NEBuffer 2 containing 1 µg of T3 or T7 DNA in addition to a reaction containing Lambda-HindIII DNA and a minimum of 5 units of Bst DNA Polymerase, Full Length incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</p> | Pass |

This product has been tested and shown to be in compliance with all specifications.

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31 Aug 2021



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31 Aug 2021